

Web appendix 1: Whole Systems Demonstrator (WSD) terminology

Whole Systems Redesign: Refers to a process that aims to produce more integrated working practices across the NHS (health care) and Local Authorities (social care) at the organisational and routine delivery levels. Whole Systems Redesign aims to produce integrated services that deliver more effective health and social care through improved sharing of information and co-ordinated care plans, and to supplant the traditional model for delivery of care by encouraging care in the home through increased use of Community Matron case management and self-care management. Telehealth and Telecare services were introduced in the WSD Sites to facilitate these aims.

WSD Sites: Each WSD Site is a region of England (Cornwall, Kent, Newham) that had undergone Whole Systems Redesign prior to the start of the WSD Evaluation. Each WSD Site comprises one (Cornwall, Newham) or two (Kent) health authority regions (i.e. Primary Care Trusts) and geographically superimposed Local Authorities.

WSD Project Teams: The three Sites each had a local WSD Project Team with responsibility for implementing the WSD Telehealth and Telecare Trials in their region in line with the protocols provided by the WSD Evaluation Team. WSD Project Teams' responsibilities included: identifying and recruiting eligible participants; installing and maintaining telehealth and telecare devices for intervention participants; training participants (and professionals) in the use of the telehealth and telecare; providing Monitoring Centre services; providing usual health and social care to all participants; providing local organisational and management resources as required to support the two trials. The WSD Project Teams comprised existing staff from the local Primary Care Trust (Cornwall), Social Services (Kent) or a combination of both (Newham). All WSD Project Teams were supported by frontline clinical and technical staff.

WSD Evaluation Team: This consisted of 24 researchers from eight institutes (City University/ University College London; Imperial College London; London School of Economics; University of East Anglia; University of Manchester; University of Oxford; The Nuffield Trust) that were involved in the design, implementation (e.g. organisation and management; collection of trial data), analysis, interpretation, write-up and dissemination of the WSD Evaluation. The Evaluation Team did not include anyone from the WSD Project Teams or from the trial funders (Department of Health). The WSD Evaluation Team is an independent body responsible for the design of the evaluation, including all sub-studies, and the production of all peer-reviewed scientific outputs.

Telehealth: In the context of the WSD Evaluation telehealth describes a system that allows the remote exchange of data between a patient (at home) and health care professionals (at a Monitoring Centre) to assist in the management of existing long-term conditions (chronic obstructive pulmonary disease, diabetes, heart failure). The telehealth system used in the WSD Telehealth Trial requires active participation by users to measure vital signs using peripheral devices tailored to their clinical needs and could include blood pressure monitor, blood glucose monitor, blood oxygen monitor and weight scales.

Telecare: In the context of the WSD Evaluation telecare describes a system that allows the remote, automatic and passive monitoring of individuals' personal health and safety (e.g. mobility, falls) and home environment (e.g. floods, fires) in order to manage the risks of independent living or provide prompt emergency responses. The monitored sensors installed for intervention participants in the WSD Telecare Trial were tailored to individual needs and could include movement sensors, falls sensors, bed/chair occupancy sensors, enuresis sensors, smoke alarms, heat sensors and flood detectors.

Usual Care: In the context of Whole Systems Redesign, usual care refers to the combined health and social care services that an individual would receive based on their needs and the system's ability to respond. For the purposes of the WSD Evaluation usual care explicitly excludes Telehealth and Telecare services.

WSD Evaluation: An umbrella term referring to all WSD evaluation activities including the WSD Telehealth Trial and Telehealth Questionnaire Study, the WSD Telecare Trial and Telecare Questionnaire Study, and all qualitative investigations of patient, professional and organisational experiences.

WSD Telehealth Trial: A pragmatic cluster-randomised controlled trial with two parallel treatment arms to assess the effectiveness of telehealth on healthcare utilisation/ costs and cost-effectiveness, relative to usual care over a 12-month period.

WSD Telecare Trial: A pragmatic cluster-randomised controlled trial with two parallel treatment arms to assess the effectiveness of telecare on healthcare utilisation/ costs and cost-effectiveness, relative to usual care over a 12-month period.

WSD Telehealth Questionnaire Study: Approximately half of the participants in the WSD Telehealth Trial were recruited into the nested WSD Telehealth Questionnaire Study to collect additional information on a broad range of patient-reported outcome measures. Similarly around half of the participants in the WSD Telecare Trial were recruited to the nested **WSD Telecare Questionnaire Study**. The WSD Telehealth and Telecare

Questionnaire Studies retain the same study design (i.e. a pragmatic cluster-randomised controlled trial) as the WSD Telehealth Trial and the WSD Telecare trial.

Trial Arms: The WSD Telehealth Trial has two treatment arms. The **intervention arm** or **group** (also called the **telehealth arm** or **group**) refers to practices allocated to receive Telehealth services as described; these terms are also used as shorthand to describe *participants* associated with intervention practices. The **control arm** or **group** (also called the **usual care arm** or **group**) refers to practices allocated to receive usual care; these terms are also as shorthand to describe *participants* associated with control practices. The WSD Telecare Trial is organised similarly.